DNP Projects   College of Nursing

2022

Activating the Patient: A Nurse Led Coaching Intervention to Engage Health Information Seeking Behaviors Using the IDEAL Discharge Framework and Get Well Network

Korinne Callihan
korinne.callihan@uky.edu
Author ORCID Identifier:
https://orcid.org/
0000-0003-3353-1281

Right click to open a feedback form in a new tab to let us know how this document benefits you.

Activating the Patient: A Nurse Led Coaching Intervention to Engage Health Information

Seeking Behaviors Using the IDEAL Discharge Framework and Get Well Network

Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Nursing

Practice at the University of Kentucky

By

Korinne Huber Callihan, MSN, RN

Lexington, Kentucky

2022

Abstract

Background: Cardiovascular (CV) patients are often overwhelmed by the unexpected emergence of the health condition, volume of knowledge for self-care mastery and acceptance of the responsibility for self-care upon care transition to the home setting. Low health literacy levels have been linked to poor outcomes in CV patients, requiring investigation into appropriate methods for patient education. The Get Well Network (GWN), an interactive digital patient education care plan at University of Kentucky HealthCare (UKHC), is underutilized in this patient population.

Purpose: the purpose of this study is to assess the effect of a nurse-to-patient coaching intervention using the IDEAL discharge framework from the Agency for Healthcare Research and Quality (AHRQ) on patient utilization of available education resources via GWN.

Conceptual Framework: The health belief model and Orem's self-care framework informed this study, asserting that an individual's belief in the readiness and motivation to change self-care behaviors leads to positive change and engagement. A coaching intervention on outcomes-related information for patient success encourages patient activation to positive change.

Methodology: In this quasi-experimental study, a sample (n=25) of the inpatient population of cardiovascular patients on four cardiovascular units (CVU) at UKHC, an academic medical center, undergo the coaching intervention to investigate any influence on patient utilization of GWN. This sample is compared to a sample pre-intervention.

Results: Data indicate the coaching intervention did not influence patient activation, health belief or self-care motivation through increased utilization of GWN. On receiving reminders for engagement with video content, the majority of patients chose to defer participation. However, engagement with medication review approached significance (p=0.054).

Discussion: GWN was designed to engage patients in their own health care through personalized education but relies on activation and motivation of the patient. Patients acknowledge greater need for education and responsibility for self-care but lack understanding of engagement necessary before hospital discharge to manage knowledge and acquisition.

Conclusion: GWN continues to be a valuable resource at UKHC, however further studies are needed to determine the most effective strategies to inspire patients and their caregivers to access the education resources provided.

     Keywords: Coaching, nurse-led, transitions of care, patient education, outcomes, quality.

Acknowledgements

I would like to recognize and thank the people without whom this would not have been possible or worthwhile. Primarily, my DNP advisor, Dr. Karen Stefaniak, for her commitment to this program and assistance through this entire DNP journey, beginning at consideration of application to the program. Her breadth of knowledge and experience translated into superior coaching and mentoring that guided me to a depth of understanding of nurse leadership that I will continue to be grateful for throughout my career. Dr. Debra Hampton, DNP faculty, provided encouragement and instilled confidence in my abilities to succeed in writing and navigating the IRB and an unwieldy project. Her exemplary organization, direction and liberal use of daisies on power points kept me optimistic that it was all going to be alright. Thank you for the small things, Dr. Hampton!

Dr. Kathy Isaacs, committee member and long-time mentor, has continued to inspire me as she followed her path and accomplished her goal. She passed along advice and encouragement while making it all seem possible, believing in my abilities before I did. My clinical mentor, Dr. Judi Dunn, brought joy to every day and endless optimism in our abilities to effect change for patients, caregivers and families through her consistent use of evidence based best practices, relational connections and pure kindness. I will forever be grateful for the years we were able to work closely, her continued mentoring and her friendship. Thank you for asking about my family more times than you asked about my project. Teresa Chase, RN, my first unit manager and good friend, guided me through pursuit of my Master's degree, without which I would not be here today. She has been part of the full development of my nursing career and has been a faithful north star and champion throughout it all. To Dr. Dee Polito, Dr. Nicole Brumfield, Dr. Sherry

3

Griggs and (Dr.) Savanna Carroll – my survival and sanity crew. It's fine. It's all fine. We've (almost) done it!

Finally, to my partners in the HEC and all my colleagues over the course of over two decades in professional practice and academic pursuit: Thank you for making me better and for giving the best of yourselves.

Dedication

This project and truly all of these efforts are dedicated to my beautiful and amazingly patient family. My best friend and husband Todd never blinked an eye and his voice never wavered when I proposed this crazy idea. His generosity, love and support have kept me going. I can't wait to have more time together. My sons have grown into young men during this process, and I am so proud of who they are becoming, their patience and grace for me. I love you both, and I'm so grateful we belong to each other. My parents, to whom I am grateful for so much, always encouraged me to reach for the hard things and loved me through all the years, showing up in the most wonderfully unexpected times with practical help and homemade food. I could not have persevered without your faith in me and support of my family. My siblings, who have made so many days brighter with laughter, memories and good-natured rivalry make my life so rich. My second mother and father by marriage never doubted my ability to succeed and their encouragement and love saw us all through. Their generosity of spirit and love has warmed me in the hardest of circumstances. The best pieces of my life are because of all of you … I am endlessly grateful for you, the life and the love we share. Finally, any initials after my name are not what makes this process meaningful. It's the knowledge that I can accomplish difficult things and grow in who I am continuing to become. And for that, I thank God most of all.

Table of Contents

List of Tables

8

List of Figures

List of Appendices

Activating the Patient: A Nurse Led Coaching Intervention to Engage Health Information

Seeking Behaviors Using the IDEAL Discharge Framework and Get Well Network

Background and Significance

In current patient care models, the practice of patient education for improved patient

activation, engagement and self-care remains a challenge with mixed results. Quality care

includes an individual patient care model and personalized patient education system that assesses

and addresses a patient's own unique needs, barriers to understanding and motivation for mastery

of self-care necessary after discharge. Factors influencing a patient's ability to engage as an

active participant in their own medical care team to further self-care behaviors include illness

related stress, fatigue, cultural differences, gender, age, education, the ability to maintain

attention and their decision-making ability, which may be influenced by structured medical

interventions designed to 'nudge' a patient toward a particular choice (RWJF, 2013, p. 4).

Another factor that is impactful on the patient's hospitalization and personal outcomes is

the patient's level of health literacy (HL), or "the degree to which individuals have the capacity

to obtain, process, and understand basic health information and services needed to make

appropriate health decisions", a measure that is unique to each patient and family, and is

dependent on their background, health care experiences and level of education (Barnason et al.,

2011, p. 15). This definition prompted the further conceptual development of three levels of HL:

functional, which is the basic reading and writing skills needed in everyday living;

communicative, a more advanced literacy allowing for extrapolation and application of new

information; and critical literacy, more advanced skills for critical analysis of information and

exertion of greater control over life events and situations (Nutbeam, 2000).

Low health literacy levels have been linked in cardiac patients to reduced self-care behaviors, reduced participation in medical decisions, reduced communication or consultation with providers, lower disease knowledge, reduced cognition, lower medication adherence levels and lower medication refill adherence, and are widely associated with patient morbidity, mortality, increased healthcare utilization and costs (Barnason et al., 2011; Magnani et al., 2018). Additionally, low HL scores are indicative of poor patient activation, defined as "a patient's knowledge, skills, ability and willingness [motivation] to manage their own health and care", and poor self-care in cardiac patients engaged with the health care system (RWJF, 2013). Critical HL is an independent determinant of fewer self-care behaviors and consulting behaviors, consistent with previous studies showing that adherence to self-care behavior in patients with HF is poor if patients do not understand, absorb and retain health information (Matsuoka et al., 2016).

The prominence of low health literacy status was examined by the United States Department of Education in a national, comprehensive survey of adults greater than 16 years of age, grouping results into four levels of health literacy: proficient, intermediate, basic and below basic. Findings indicated that only 12% had proficient health literacy levels, 53% of adults had an intermediate level health literacy, 22% had a basic level, and 14% had below basic (USDE, 2006).

In eastern and central Kentucky, where many UK HealthCare (UKHC) patients reside, the health literacy rates by county average at basic levels (University of North Carolina at Chapel Hill [UNC-CH], 2014). From these data, we can extrapolate that patients referred to UK HealthCare may be at considerable risk of low health literacy levels, engagement and self-care

and associated outcomes. Figure one describes common medical tasks associated with literacy levels.

Due to the understood impact of low health literacy on health, UKHC has established interventions to promote patient activation in their own care by participation in education about their condition. In the four cardiovascular patient units (CVU) involved in this study, the medical team has the ability to 'prescribe' patient education videos for patients to watch through the Get Well Network (GWN), an interactive patient education system available in the patient room via the TV console. This allows selected content for the patient's condition to be delivered for patient use throughout their hospital stay, preparing them in advance for transition of care, and avoiding hurried education at the time of discharge. According to GWN data, during patient visits to the four CVU prior to this study's inception (between April 1 and May 6, 2021), only 8.7%* of patient education video resources selected by the medical team for patients according to learning need were utilized by patients and families before hospital discharge, representing a significant lack of activation or self-care behavior for education (*this number does not include required assignments for Joint Commission content and viewing of patient safety videos that are auto-prescribed) (GWN, 2021).

While the GWN was found to be under-utilized by patients, it was also found that patients rated their experiences with education poorly. At UKHC and throughout the healthcare industry, patient care and patient experience metrics are investigated for individual patient care units through the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey, a national, standardized, publicly reported survey of patients' perspectives of hospital care (HCAHPS: Patients' Perspectives of Care Survey, 2020). The scores are received from patient surveys post-discharge, aggregated and published internally to monitor progress in

multiple domains reflecting patient experience, including communication with providers and nurses, communication about medications, discharge information and care transitions. HCAHPS scores from the CVU during the second quarter of FY 2021 through second quarter of FY 2022 indicated that CVU patients rated their experiences well below threshold levels in the domain of care transitions, specifically the metrics of having a "good understanding of managing health" and understanding "the purpose of taking meds" (Table 1) (Press-Ganey, 2022).

Problem Statement

Health literacy is not the only challenge faced by patients and families. Many are faced with a lack of self-care behavior or self-care maintenance, not responding to negative health cues or not behaving in accordance with known health requirements. Patients face numerous barriers in the hospital setting, placing them at a physical and psychological disadvantage for optimal outcomes. The level of illness acuity, emotional response and anxiety, fatigue, and cognitive ability, in addition to health literacy level, negatively influence patient ability to engage in health interventions. This common situation often leads to a standardized education intervention at the time of hospital discharge, when patients and families are given copious amounts of written material about their condition and self-care instructions to guide their actions at home...overwhelming the patient and caregivers (Commodore-Mensah & Dennison Himmelfarb, 2012). Even well-intended interventions can miss the mark – discharge instructions that comply with Joint Commission guidelines have been difficult for patients and families to understand and follow post-hospitalization as nurses may over-estimate the health literacy levels of patients they care for (Cutilli, 2020; Regalbuto et al., 2014). In short, patients in the cardiovascular inpatient setting facing acute health events are ill-prepared to absorb education needed for better health outcomes.

Context, Scope and Consequences

It is understood from the CVU HCAHPS data that patients were dissatisfied with their preparation for transition of care and may have felt unprepared for transition to their home environment and the need to assume responsibility for their own medical self-care. Patients who don't understand the elements of self-care described in discharge instructions (specifically including medications, access to the medical system and signs and symptoms of a worsening condition) are at higher risk of complications, including readmission, leading to further complexity in their care, risk of co-morbid conditions, delayed recovery and increased medical costs (Koh et al., 2012). Additionally, health literacy reviews have shown that despite educational interventions, patients' recall of discharge instructions is limited, especially in the elderly, and lower quality of discharge education has been shown to increase risk for hospital readmission (Koh et al., 2013).

Current Evidence Based Practice and Strategies

Patient education standards at UKHC are based on current evidence-based practice and strategies supported by the professional literature. Quality patient discharge education includes components of both the nursing and education disciplines, encompassing a "holistic, patient/caregiver-centered approach while individualizing care planning based on the characteristics of the patient and caregiver, their settings and their skills" (Luther et al., 2019, p. 328). The professional nurse coexists as a teacher through informing, educating and reinforcing each element of care with patients and their caregivers using the nursing process. An elemental curriculum in each school of nursing, the nursing process includes four essential actions that make up the center of nursing care: assessment, planning, intervention and evaluation. This

practice engages the nurse and patient in a collaborative relationship that passes knowledge effectively from the expert (nurse) to the novice (patient and caregiver).

Assessment begins and continues with each nurse/patient interaction through conversation and observation on admission and continuing with all patient care. The nurse should begin assessment through asking the patient/caregiver what concerns they have regarding their illness and what their level of knowledge is regarding their condition. The Centers for Medicare and Medicaid Services (CMS), Joint Commission and other professional guidelines dictate that patients/caregivers should be assessed for impactful religious or cultural beliefs, psychological barriers, cognitive or physical limitations, communication barriers and most importantly, motivation and desire to learn (Cutilli, 2020).

The nurse plans educational interventions focused on transfer of knowledge regarding etiology of the condition, contributing factors, medication instructions, recognition of symptoms indicating a worsening condition and need to re-access the medical system in addition to the importance of follow-up appointments. This content is delivered in a format appropriate to the patients assessed learning abilities and preferences through implementation of impactful teaching methods – written material, video or audio resources, direct instruction or tactile, or demonstration using models or other care items. Finally, the implementation is evaluated through a process of evaluation. At UKHC, the evidence-based teach-back process widely recognized as best practice for evaluation of patient understanding and retention is expected practice (Luther et al., 2019). This process is best carried out daily, starting at admission to allow for review and reinforcement of concepts important to safe discharge care, and should always be followed by the teach-back (or show-back) process. Before discharge, all patients are to receive written instructions that are reviewed with the patient and caregivers by the provider and / or nurse

assigned to the patient, and the discharge instruction is then documented in the electronic

medical record (EMR) (UKHC, 2020a).

According to UKHC policy, all patients should be assessed within 24 hours of admission

for learning preferences and risk of low health literacy through existing patient profile

questionnaires and educational assessments included in the EMR (UKHC, 2020a). The education

assessment includes multiple choice answers regarding barriers to learning (visual, reading,

hearing, physical, emotional, cognitive, spiritual, financial, cultural, etc.), preferred language,

preference for learning new concepts (listening, reading, demonstration or pictures/video) and a

follow-up free-text question, "Are there any questions and concerns the patient would like to

review?" (Epic Systems Corporation [EPIC], 2021).

Over time, and with the evolution of nursing practice, this process has become more

automated through education resources including databases, video and other media. Currently at

UKHC, instruction sheets from the Krames / StayWell corporate library are utilized through the

EMR as clinical resources for patient education, including over 1,800 customized education

handouts specific to UKHC practice and providers. The educating clinician selects the

appropriate topic content and format to print and use during bedside education, and the EMR

documents topics selected for the patient as part of their medical record.

In addition, the Get Well Network (GWN), an integrative patient education software

system, was implemented throughout the UKHC enterprise beginning with the CVU in 2016.

This system allows video patient education to be selected based on the assessed patient needs

and delivered directly to the patient in their room via the TV console, where the education can be

selected via an application style home screen and viewed repeatedly to fit the patient's assessed

educational needs. Prescribed medications from the medication administration record (MAR) are

interfaced with GWN and patients receive prompts to engage with both the selected videos and medication information for their prescribed medications.

Historically, GWN has chronically low numbers for staff utilization and assignment of patient education videos to patients and caregivers. When content was assigned to patients, completion of such assignments was also low, indicating that staff were not using the program consistently for patient education, and that when it was implemented, patients and caregivers were not completing the assigned viewing for education on critical information for discharge and assumption of effective self-care.

Purpose

Patients in CVU may engage in discussions about self-care instructions from assigned bedside nurses, discharge nurse coordinators, pharmacists, advanced practice providers (APP), and physicians; however, this instruction is provided from the perspective of the medically knowledgeable, potentially leaving the patient and caregiver overwhelmed by medical jargon and at the mercy of provider time limitations. Patient education is positively impacted through simplification of the process: identification of key concepts, and directing patient attention to these areas improves long-term retention (London, 2016). This information introduces the idea of patient responsibility in seeking information, suggesting to them the information that they will require for 'survival skills' in preparation for self-care at home. Therefore, the purpose of this study is to assess the effect of a nurse to patient and caregiver (when available) education coaching intervention using the IDEAL discharge framework from the Agency for Healthcare Research and Quality (AHRQ) on patient utilization of available education resources via GWN.

Objectives:

Specific objectives of this project include:

- Review existing utilization of GWN on cardiovascular units;

- Coach patients on key elements of engaging the patient and family through use of IDEAL discharge format to affect patient activation for self-care behaviors;

- Review utilization of GWN on cardiovascular units after coaching intervention;

- Analyze impact of coaching intervention on patient utilization of GWN compared to GWN utilization from patients who did not have coaching intervention;

- Use information from the analysis to determine if coaching intervention is a valuable tool to increase patient activation for self-care behaviors through use of GWN resources.

Theoretical Framework

The hospital experience today is not that of patients in the past. Hospital acuity has increased, provider roles have changed, staffing models have developed and the responsibilities of the patients themselves have grown to include self-care and self-advocacy tasks. In the past, the role of the patient was passive as they were the subject of a paternalistic medical system. Now, however, patients are expected to be part of shared decision-making, taking an active role in their care with a need for knowledge, confidence, skills and willing participation (Ingadottir et al., 2020; RWJF, 2013). The best medical practices seek to empower and activate their patients and caregivers to promote optimal outcomes, which aligns with both the Health Belief Model (HBM) and Dorothea Orem's nursing framework of self-care. The HBM was developed in the mid-20th century based on work by Kurt Lewin's social psychology theory, an examination of the degree of difficulty of goal attainment, which states that individuals will aspire to goals

19

slightly higher than what they have attained in the past, no matter how much more valued the higher goal, leading individuals to weigh the benefit of the higher goal against the cost to attain it (Mikhail, 1981). The individual's readiness to engage with change is relative to their perceived susceptibility to the health condition and perceived severity of its consequences; however, there must be a catalyst to prompt change behaviors and engage in the process of health improvement to effect change (Mikhail, 1981).

Orem described human beings as self-care agents who should assume responsibility for self-care through interaction and exposure to others to increase knowledge, motivation and skills to utilize in development of self-care abilities. When an individual's self-care needs exceed their self-care abilities (as with cardiovascular patients undergoing hospitalization for an acute event) a self-care deficit occurs and Orem's supportive-education self-care system is used to structure nursing interventions designed to further educate and empower patients through skill development, knowledge gains and reasoning, with the nurse acting as a regulator, educator, supporter and counselor (Mohammadpour et al., 2015).

These frameworks have been widely used in patient education intervention studies that have found positive correlations between availability of education resources, staff engagement, patient activation, increased knowledge and self-care behaviors (Attaallah et al., 2021; Barnason et al., 2011; Ingadottir et al., 2020; Younas & Quennell, 2019). The health belief model and self-care frameworks prompt the patients' belief that control over personal outcomes is possible, through the intervention of coaching on outcomes-related information for patient success, inspiring patient confidence and improved engagement with education resources.

Review of Literature

The professional literature was searched to guide the project using CINAHL, PubMed, and Google Scholar databases using the following search terms: transitions of care, discharge education, discharge teaching, IDEAL discharge, nurse coaching, patient education, myocardial infarction, myocardial infarction discharge education, readiness for discharge, patient empowerment, patient activation, patient motivation, self-care belief, education intervention, education outcomes. Criteria for inclusion were articles less than 15 years old, English language, cardiovascular disease, with focus on inpatient education intervention, hospitalized patient population, patient empowerment and activation, and patient outcomes. Exclusion criteria removed articles pertaining to outpatient interventions, languages other than English, non-cardiac disease, non-nursing intervention. This query returned over 500,000 results, a total of 156 articles were considered, and applying the above criteria yielded a total of 37 that met criteria.

Identification of Gaps in Knowledge: Patients and caregivers hospitalized for cardiovascular disease identify there is a knowledge gap related to understanding of the health event that occurred, future self-management of disease, information regarding emergency care and personal, health-related safety, knowledge of basic heart function and the impact of the acute event and stress or psychological factors that will affect future health and management strategies (Timmons & Kaliszer, 2003). Readiness for discharge components include physical stability, functional ability, competence to manage self-care at home and preparedness for home arrival, adequate coping skills, social support availability, education, knowledge of what to expect, community resources and access to the healthcare system (Weiss et al., 2007). Patients and their caregivers report they receive less knowledge than they expect, which may require more intensive assessment on patients desire for information quantity, structure, and quality(Ingadottir

21

et al., 2020). However, when given adequate emotional support, educational resources and counseling to develop confidence and self-efficacy, strong correlations are found with patient outcomes and successful self-care behaviors (Masterson Creber et al., 2016).

Synthesis of Evidence*:*

Failure of previous interventions: Past failure of interventions related to education focused on poor management of existing barriers, including: skills and knowledge, cognitive impairment related to hospital treatment, excessive daytime fatigue, low health literacy levels, and poor motivation (Falun et al., 2016; Luther et al., 2019). Decreased effective coping, adjustment, quality of life and health-related compliance were found to be barriers as well as elevated in-hospital levels of anxiety, depression, hostility, fatigue, hopelessness, and post-traumatic stress or distress; in addition, nursing shortages and shorter discharge process times as well as nurses lacking adequate skills for effective educational interventions (Commodore-Mensah & Dennison Himmelfarb, 2012).

Health literacy and personalized strategies: Evaluation of knowledge gaps, assistance with goal setting, implementing a teaching plan and evaluating outcomes established an effective patient and caregiver centered discharge process (Cutilli, 2020; Luther et al., 2019; Veronovici, 2014). Health literacy is independently associated with improvement in self-care behaviors and abilities of individuals with cardiovascular disease (Magnani et al., 2018; Matsuoka et al., 2016). Health literate education, support and counseling correlated with higher levels of self-care knowledge, motivation and skills while personalized discharge education protocols increased patient engagement and facilitated increased patient centered service (Cherlin et al., 2012).

Significant Interventions: Computer-based education interventions have been effective, however the literature identifies that relational communication from a face-to-face encounter

appear to be most effective in positive communication (London, 2016). Programs that consist of multiple sessions, organized and structured interventions improved recall and retention, and were shown to be more effective for patients and caregivers with low health literacy levels (Commodore-Mensah & Dennison Himmelfarb, 2012; Okrainec et al., 2017; Siegrist et al., 2018). Assessment of a patient's activation, or a measure of a person's self-concept as a manager of their health and health care, includes measurement of health beliefs, confidence in managing health related tasks and self assessed knowledge (Hibbard & Greene, 2013).

Proposed Strategy to Address Gap: Literature reviewed identifies that interventions designed to focus on empowerment and activation of the patient with contributions to building self-care, communication ability, and problem-solving skills are more effective than teaching blocks or lists of medical information (Hibbard & Greene, 2013). A systematic approach to the patient's transition of care including active patient engagement, coordination of care and services, and education about medication, equipment and follow-up care improves outcomes and results in better patient self-care (Tah et al., 2019). Personalized intervention that focus on the patient (and caregiver) learning styles, health literacy levels, and motivation are more effective at improving empowerment and motivation (Cutilli, 2020; Lau-Walker, 2014; Okrainec et al., 2017; RWJF, 2013). The IDEAL discharge framework from AHRQ reduced readmission rates and increased satisfaction of medical providers (Tah et al., 2019).

<div align="center">

Methods

</div>

Design

The study is a quasi-experimental study. Because this project was designed during the COVID-19 pandemic, it was intended to have a minimal requirement of participation from healthcare staff (awareness of project only), by design engaging the patient (and caregiver, if

available) to actively pursue information that is required to assist in their own recovery and healing.

The principal investigator (PI) adapted the IDEAL discharge framework, an open-source booklet resource from the AHRQ, to include information regarding the GWN education system. The IDEAL discharge resource was developed for the U.S. Department of Health and Human Services' Agency for Healthcare Research and Quality by an expert group with the goal of reducing adverse events and hospital readmission by engaging patients and family members in the transition plan. Patient and family engagement in the discharge process involves the successful transfer of knowledge, and the IDEAL discharge tool strategy includes the fundamentals of education and of engagement. "Elements essential to successful and efficient care transitions include active patient engagement, coordination of care and services, and education about medication, equipment and follow-up care", and this systematic approach can improve patient outcomes and results in better patient self-care (Tah et al., 2019, p. 29).

The booklet consists of six statements followed by self-reflection questions to prompt planning and anticipation for transition. The statements include:

- I feel confident that I or someone close to me can take care of me when I leave the hospital.

- My family or someone close to me knows I am coming home. They also know about the next steps in my care.

- I know what my medicines are and how to take them.

- I know what problems to look for and who to call if I have problems at home.

- I know that follow-up appointments are an important part of my continued medical care. I know when my follow-up appointments are and how to get there.

- I know about other help I need at home.

Setting

Agency Description

UKHC is an academic medical center in central Lexington with 945 inpatient beds that discharged an average of 107 patients per day in 2020 (UK HealthCare [UKHC], 2020b). This patient volume is decreased slightly from the prior years due to restricted or eliminated patient and facility operations related to the COVID-19 pandemic; however, UK HealthCare has seen year-over-year growth for the past decade (UKHC, 2020). The four CVU included in this study are an ICU, progressive care unit, and two step-down units. Cardiovascular patients encompass those admitted for myocardial infarctions (NSTEMI, STEMI), percutaneous interventions (PCI) via the catheterization lab, coronary artery disease (CAD), arrhythmia or electrophysiologic conditions, HF, and cardiac structural conditions such as valve stenosis or cardiomyopathy may be admitted initially to the cardiac intensive care unit after an interventional procedure, but are transferred after stabilization to the cardiac progressive care units under the clinical direction of nurse patient care managers (PCM) and assistant patient care managers well as clinical nurse specialists (CNS) and expert nurses.

Stakeholders

Stakeholders include the PCM and CNS, assistant PCM, patients, caregivers, bedside nursing staff, program nurse coordinators, the cardiac rehabilitation referral coordinator, patient education specialists and GWN support staff, nursing care technicians, pharmacists and medical providers (physician, APP or residents).

Congruence of project to agency's mission/goals/strategic plan

UK HealthCare's stated mission and vision identify the pillars of academic health care: research, education and clinical care that is dedicated to the health of people of Kentucky while striving to become one community committed to creating a healthier Kentucky (UK HealthCare, 2019). As the volume of patients has increased, the acuity of patients continues to increase as well across all service lines with a case mix index (CMI) reaching 2.17, an increase of 0.18 over the previous year, meaning patients are sicker than ever before (UKHC, 2020). These patients establish trust with UKHC for their care and outcomes, believing the research, education and clinical care elements of excellence are all to their benefit. This project strives to put into patient care and practice the best of these elements: research of best practices, education on self-care participation and clinical care that engages and improves the abilities of the patient for better outcomes.

Facilitators and barriers to implementation

Facilitators to implementation include motivation of PI, motivation of patients and caregivers for hospital discharge and personal health outcomes, engagement of staff with change, patient information seeking behaviors and utilization of the GWN while barriers include staff time, attention and energy along with patient and caregiver fatigue.

Sample

The convenience sample includes patients admitted to the CVU at UKHC who have experienced a cardiovascular event causing hospitalization who are interested in a coaching intervention focused on elements of learning to improve their medical outcomes. A sample size of 51 patients were approached, 26 patients declined or were unable to participate and 25 were enrolled. Inclusion criteria consisted of: hospital admission for diagnosis of cardiovascular

disease, patient age between 25-75 years, male or female gender, and all ethnic and racial groups. Additionally, subjects need to have a basic understanding of technology use with the TV and navigation of GWN, which is arranged in an "app" format on the home screen. Exclusion criteria consisted of: cognitive impairment or impediment to learning due to pre-existing condition, dementia or onset of delirium, patient education refusal, patients with disposition to rehabilitation or other skilled nursing facilities, prisoners, age <25 or >75, non-English speaking and illiterate patients.

Potential participants were identified by CVU staff (PCM, cardiac rehabilitation coordinator, or nurse coordinators) and referred to the PI. The PI evaluated patient criteria for participation via the EMR and discussed patient condition with the assigned bedside nurse to ensure appropriate timing for discussion with patient. Five patients were removed pre-enrollment from consideration due to acute condition not amenable to interaction as the nurse indicated their condition was inappropriate (vomiting, procedure scheduled, sleeping, etc); otherwise patients were approached, introduced to the study and invited to participate. The study included a sample of patients from the CVU who elected to participate in the intervention, named group 2 (G2) (n=25). Group 2 was compared to patients who had been admitted pre-intervention (Group one or G1) (n=40). Group 1 included patients admitted to the same CVU with similar cardiac diagnoses up to three months before the intervention that were randomly selected from a cardiovascular EMR report for comparison purposes.

Procedure

IRB Approval

The IRB was approved in November 2021. A modification was approved in January 2022 to broaden inclusion criteria to all patients with cardiovascular disease admitted to the CVU and increase sample size.

Evidence Based Intervention

The PI approached patients who were referred to the study after determination of eligibility. After informed consent was obtained, a ten-minute coaching session commenced between the patient (and caregiver, if available) and the PI, discussing factors contributing to successful transition to home that are included in the IDEAL discharge booklet. Emphasis was placed on patient activation, health belief and self-care motivation stating, "As an engaged, active patient, you have the ability to participate in your own medical care and impact the success of your discharge education". The contents were reviewed and explained page by page, followed by PI-directed patient engagement with the GWN system in the room.

Patients were instructed to manipulate the GWN equipment to find the pertinent education elements on the GWN system home screen, designed similarly to a smart device with applications or "apps" that can be selected for content. Patients navigated to the "Videos picked just for me" and "My medicines" spaces and selected content options to interact with information necessary for successful transition of care. The app "Videos picked just for me" included videos selected for the patient based on their learning needs, and the app "Learn about my medicines" included the detailed medication information for patient review, including reason for use and side effects. The patients were instructed that they could access these areas at any time to review assigned videos and medications, as well as to access other features of GWN such as the internet,

browsing additional health videos, watching TV or movies and finding out more about UKHC. The session was then closed after patient questions were answered. This coaching was in addition to the current nursing standard procedure for patient discharge instruction provided by the patient's nurse.

Measures and Instruments

Patient utilization of GWN was compared post-intervention (G2) to a group pre-intervention (G1) to determine effect of a coaching intervention on patient activation of self-care behaviors through selection of education content in preparation for hospital discharge.

Data Collection

All patient study related data were collected using an Excel spreadsheet and PHI protection was maintained. Demographic data collected from both groups included age, gender identity, race/ethnicity, county of origin, length of stay, assigned unit, cardiac diagnosis, and medical record number. Collected from the EMR were the results of the education assessment including learning style preference, number of videos and medications ordered through the EMR and indication if the bedside RN had ordered GWN content.

The UKHC / GWN Patient Learning System (PLS) administrative dashboard recorded all GWN patient utilization data as standardized process and was queried for number of assigned education videos, assigned medication information sheets, patient access to those resources including response to reminder prompts, selection of education videos and medication education and number of selections for movies and TV. The GWN system automated prompts that were shown on the patient's TV screen to notify them immediately of newly ordered medications or videos, or a twice-daily reminder for content that had not yet been reviewed. In the prompt box, patients could select "learn about my videos/medicines now" or "remind me later", or patients

could ignore the message, and it would disappear after one minute. If "remind me later" was

selected, the patient would receive additional prompts every two hours for four occurrences.

Data Analysis

Data were analyzed with IBM SPSS version 28 with an alpha level of 0.05. Descriptive

statistics were used to summarize frequency of patient interaction with GWN features, self-

directed selection of video and medication education content and patient responses to prompted

questions to engage with video and medication education, as well as study participant

demographic data including means and standard deviations, frequency distributions or median

and interquartile ranges.

For each GWN topic (i.e. videos ordered, medication to review, etc.), the percent

complete was calculated and used for analysis purposes. For example, the percent of videos

viewed was calculated as the number viewed divided by the total ordered as a percentage. The

two-sample t-test was used to evaluate changes over time in utilization of GWN pre- and post-

intervention in viewing ordered health education videos, medication information and instructions

and responding "view now" or "remind me later" to daily prompts for videos and medicines that

had not been reviewed. A Pearson product moment correlation coefficient examined the

association among selection of the entertainment app "Watch TV and movies" and utilization of

patient education videos through the "Watch videos picked just for me" app.

Results

Demographic data between groups were similar for both the intervention group (n=25)

and the comparison group (n=40) (see Table 2). Participants in both study groups had similar

ages, (G1 M=60 years, SD 9.9; G2 M=57 years, SD 13.2). There were more males than females

in both groups (G1 67.5%, G2 72%) and both groups were predominantly white (90% and 88%,

respectively). For the majority, educational assessments were completed on patients (72% and 80%), however only 38% of them were done within 48 hours of hospital admission. Patient response to learning preference is shows a strong preference for "listening", with a 72% result in both G1 and G2. Patients in both groups were admitted with cardiovascular diagnoses, the most prevalent was coronary artery disease (G1 47.5%; G2 36%), followed by heart failure (G1 22.5%) and structural heart disease (G2 28%). Most patients were assigned to the 8-100 Universal unit (G1 40%; G2 36%).

Data from those enrolled in this study indicate the coaching intervention did not influence patient activation, health belief or self-care motivation through utilization of GWN patient education resources on these CVU as there was no difference in GWN engagement between the two time points. The t-test outcomes determined no statistical significance between variables with all p-values below 0.05 (Table 3). The results for patients' elective review of medications through selection of the "Learn about my medicines" app approached significance with an increase in medication information utilization from 6% to 21% between groups (p=0.054). Pearson's correlation coefficient was used to evaluate the association between utilization of the entertainment functions and utilization of the patient education functions, which did not indicate any correlation (r= 0.008, p=0.950).

The difference in the means in response to "view now" and "remind me later" indicated the majority of patients chose to defer education to a later time, or did not respond to the prompt in any way. There was no correlation between age, gender, specific CVU or diagnosis and patient utilization of GWN for either group.

Discussion

Patient education remains a challenge in patients with cardiovascular disease. Traditional methods of patient education (one-on-one discussion and handouts) are time-consuming in a setting where increasing demands are placed on increasingly stressed staff. Effective discharge education with patients and caregivers decreases hospital readmission, increases activation and motivation for self-care behaviors, while leaving patients and caregivers more satisfied their care (Luther et al., 2019). At UKHC, feedback from a cardiovascular patient advisory group prior to this study indicated that stacks of education handouts given at the time of discharge are not helpful to patient learning and GWN would be preferred, yet utilization was still found to be insignificantly affected through a one-time coaching for use of GWN in this study.

Ponderance of the study outcomes and observation of the unit staff behaviors produce additional considerations: patient educational assessment and nurse involvement in the GWN education process. While neither were directly measured for quality, observed behaviors could influence study outcomes. Patient educational assessments were infrequently completed at all, and when they were, not always completed within 24 hours of admission as hospital policy mandates (UKHC, 2020a). Assigned bedside nurses were consulted pre- and post-intervention, and many recounted unfamiliarity with the GWN system, process of ordering videos and participation in directing patients to the education resources.

A standard assessment of a patient's desire to learn as well as their learning needs, followed by implementation of individualized education modules like GWN, has been shown to have statistically significant improvements in information retention and self-management skills compared to standardized education and no education, especially when combined with the teach-back process (Veronovici, 2014). Through review of the EMR, it was discovered 25% of

32

patients in G1 and G2 were not assessed at all for learning barriers, preferred language and style of learning for education interventions, and of those that did have an assessment, 62% did documentation it had been completed until day of hospitalization two or greater.

Patient response to the learning style preference assessment indicated that video presentation was the least preferred style with discussion or conversation the most preferred. EMR review of patients in the CVU yielded inconsistent documentation of performed educational assessments, and of those completed, the majority of patients responded that "listening" was their preferred method of learning which was also the first option for listed answers on the assessment. The frequency of this occurrence led to the suspicion and inability to rule out that this option was chosen from convenience rather than true assessment and reflection. Assessment of learning needs is the foundation of the nursing process for education, and should not be considered a rote task to check off the list but rather an analytic process to determine the starting point for progression to patient improvement. As part of nursing's scope of practice, education must be prioritized as highly as other skilled outcomes that affect patient safety and outcomes.

GWN was designed in part to reduce the time required to educate patients on complex ideas through introduction of the topic via plain language videos appropriate for every patient regardless of health literacy level (GWN, 2022). The patient interaction with GWN should be planned out for maximum adherence to the process of education. Best practice for teaching with a video tool includes beginning with a patient-specific selected GWN video content introduced by an engaged nurse who dialogues with the patient and summarizes the health topic. Ahead of the video intervention, the nurse should inform the patient of why the content was chosen for them, the content they will view, how it applies to their health situation, and what to especially

note in the video itself (London, 2016). Afterward, the nurse will return to discuss the content with the patient through reviewing information, correcting misconceptions and closing the education loop through teach-back and documentation of outcomes.

This evidence-based method relies on nurse participation, interaction with the GWN system, and activation of the patient which requires motivation for self-care behaviors, which are increasingly seen as an essential component of the patient responsibility (Lau-Walker, 2014; London, 2016). Setting an expectation that videos should be watched at a particular time of day increases likelihood that patients will be aware of their obligation to learn. The patient may select an appropriate time for "on-demand" education that is convenient for them, a time that may not coincide with the availability of their nurse, and content is able to be reviewed multiple times if needed. In the process, the patient and caregiver receive reliable health education in a proven style that is not dependent on the communication skills or experience level of their assigned nurse. This best practice education process involves the bedside nurse in a featured role – one of encourager, task manager, and leader.

This study demonstrates that patients require more support than one coaching intervention to improve activation and initiate self-care behaviors. The literature shows that patients want and expect to learn while in the hospital and interventions to support patient engagement would benefit from increased frequency and support of caregivers (Ingadottir et al., 2020; Mohammadpour et al., 2015).

Implications for Practice, Education and Future Research

This project has yielded many gains in examination of the process of patient education and utilization of GWN. Based on the experience of this study and data outcomes, implications for future practice and education include re-emphasis on a systematic and standardized process

for completion of patient assessment of learning needs and patient preferred learning style. Additionally, investigation of existing barriers to staff utilization of GWN.

During patient recruitment, as the PI discussed the GWN intervention with the patient's bedside nursing staff, it was observed that GWN was not a familiar tool for patient education on the CVU. Staff nurses voiced uncertainty regarding the use of GWN during explanation of the study and interaction with the patient. The feedback reflected unease navigating the system, selecting and ordering videos for intervention, interacting with patients and families regarding GWN utilization and review of medication information. The impact of the pandemic on staff turnover, orientation along with visitor restrictions limiting availability of caregivers for education interventions, high patient acuity, altered pandemic staffing and documentation practice models all affect the patient education process, and should be considered as hindrances in future practice.

Further examination into the barriers facing bedside nursing staff with patient education and GWN utilization is necessary. Hospital leadership, service line directors, PCM and assistant PCM, CNS and staff development should support and encourage a multi-faceted approach to GWN and patient education: re-orientation and utilization of GWN with bedside nurses and their patients, establishment of a standard check-off process, practice audits, staff support from GWN experts on the unit and role play to support positive interaction with GWN functionality and patient engagement. Future studies are recommended to include investigation of the confidence level of patients and their caregivers surrounding self-care behaviors before care transitions, barriers to nurse utilization of GWN and participation in video / medication education with patients including reinforcement and documentation of learning outcomes.

Limitations

There are a number of limitations identified for this project, with the largest detrimental impact being the COVID-19 pandemic and associated challenges. The nursing staff was heavily impacted by changing patient requirements, change to workflows and implementation of new tasks. The high volume of COVID patients in medicine units impacted the throughput of cardiac patients in the CVU, affecting the number eligible for the study. Many patients who met eligibility requirements for the study were found to be COVID positive, requiring they be removed from consideration for infection control purposes and further limiting the sample size. Patients were recommended to continue wearing masks in their hospital rooms and visitors were restricted, enabling the PI to only make one visit for engagement, instead of the desired two visits. Changes to required documentation due to "crisis" demands on nursing time and patient care reduced or eliminated the normal process of documenting patient education interventions for self-care and medications, affecting the ability of the PI to effectively evaluate patient education interventions.

Historically, the GWN launch throughout the UKHC enterprise suffered from numerous interruptions due to implementation of a new EMR, eICU, competing programs requiring information technology support conflicts, nursing shortages, nursing staff turnover, and agency nurse staffing, which all contributed to inconsistency in patient education processes including staff knowledge of GWN and its utilization. It is reasonable to consider these inconsistencies led to disenfranchised staff and affected orientation and training to normal unit processes, reducing staff-directed patient direction to the GWN system and all of its resources. Additionally, as part of the study design, bedside nurses received no coaching regarding utilization of GWN, which could have affected the outcomes.

Conclusion

Patient education remains a challenge with cardiovascular patients, even with programs designed to further the reach of bedside nurses tasked with educating the patient for improved outcomes. It remains a fundamental nursing responsibility that requires early assessment, a personalized plan, consistent, timely intervention and evaluation for success before a patient leaves the facility, with recognition of patient motivation desire for success. GWN continues to be a valuable resource at UKHC, however further studies are needed to determine the most effective strategies to inspire patients and their caregivers to access the education resources provided.

References

Agarwal, K. S., Bhimaraj, A., Xu, J., Bionat, S., Pudlo, M., Miranda, D., Campbell, C., & Taffet, G. (2020). Decreasing heart failure readmissions among older patients with cognitive impairment by engaging caregivers. *Journal of Cardiovascular Nursing*, *35*(3), 253–261. https://doi.org/10.1097/JCN.0000000000000670

Agency for Healthcare Research and Quality. (2011). *Care transitions from hospital to home: IDEAL discharge planning* (Strategy 4) [Handbook]. ahrq.gov

Agency for Healthcare Research and Quality. (2018). *AHRQ Health Literacy Universal Precautions Toolkit*. https://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy-toolkit/index.html

Agency for Healthcare Research and Quality. (2017, December). *Teach-Back: Intervention*. AHRQ: Agency for Healthcare Research and Quality. Retrieved September 11, 2020, from https://www.ahrq.gov/patient-safety/reports/engage/interventions/teachback.html

American Heart Association. (2017). *Evidence for therapeutic patient education interventions to promote cardiovascular patient self-management: A scientific statement for healthcare professionals from the American Heart Association* [AHA Scientific Statement]. American heart Association. https://doi.org/10.1161/HCQ0000000000000025

Artinian, N. T., Harden, J. K., Kronenberg, M. W., Vander Wal, J., Daher, E., Stephens, Q., & Bazzi, R. I. (2003). Pilot study of a Web-based compliance monitoring device for patients with congestive heart failure. *Heart and Lung*, *32*(4), 226–233. https://doi.org/41.1016/S0147-9563(03)00026-8

Artinian, N. T., Magnan, M., Sloan, M., & Lange, M. P. (2002). Self-care behaviors among

    patients with heart failure. *Heart & Lung*, *31*(3), 161–172.

    https://doi.org/10.1067/mhl.2002.123672

Attaallah, S. A., Peters, R. M., Benkert, R., Yarandi, H., Oliver-McNeil, S., & Hopp, F. (2021).

    Developing a middle-range theory of heart failure self-care. *Nursing Science Quarterly*,

    34(2), 168–177. https://doi.org/10.1177/0894318420987164

Barnason, S., Zimmerman, L., & Young, L. (2011). An integrative review of interventions

    promoting self-care of patients whit heart failure. *Journal of Clinical Nursing*, *21*, 448–

    475. https://doi.org/10.1111/j.1365-2702.2011.03907.x

Bobay, K. L., Jerofke, T. A., Weiss, M. E., & Yakusheva, O. (2010). Age-related differences in

    perception of quality of discharge teaching and readiness for hospital discharge. *Geriatric*

    Nursing, *31*, 178–187. https://doi.org/10.1016/j.gerinurse.2010.03.005

Brandon, A. F., Schuessler, J. B., Ellison, K. J., & Lazenby, R. B. (2009). The effects of an

    advanced practice nurse led telephone intervention on outcomes in patients with heart

    failure. *Applied Nursing Research*, *22*, e1–e7. https://doi.org/41.1016/j.apnr.2009.02.003

Centers for Disease Control and Prevention. (2022, February 7). *Heart Disease* [Fact Page].

    https://www.cdc.gov/heartdisease/facts.htm

Cherlin, E. J., Curry, L. A., Thompson, J. W., Greysen, S. R., Spatz, E., Krumholz, H. M., &

    Bradley, E. H. (2012). Features of high quality discharge planning for patients following

    acute myocardial infarction. *Journal of General Internal Medicine*, *28*(3), 436–43.

    https://doi.org/10.1007/s11606-012-2234-y

Commodore-Mensah, Y., & Dennison Himmelfarb, C. R. (2012). Patient education strategies for

    hospitalized cardiovascular patients: A systemic review. *Journal of Cardiovascular*

    Nursing, *27*(2), 154–174. https://doi.org/10.1097/JCN.0b013e318239f60f

Cutilli, C. C. (2020). Excellence in patient education: Evidence-based education that "sticks" and

    improves patient outcomes. *Nursing Clinics of North America*, *55*.

    https://doi.org/10.1016/j.cnur.2020.02.007

Epic Systems Corporation. (2021). *Epic Hyperspace* [Computer software].

Falun, N., Fridlund, B., Schaufel, M. A., Schei, E., & Norekval, T. M. (2016). Patients' goals,

    resources, and barriers to future change: A qualitative study of patient reflections at

    hospital discharge after myocardial infarction. *European Journal of Cardiovascular*

    Nursing, *15*(7), 495–503. https://doi.org/10.1177/1474515115614712

Get Well Network (GWN). (2022). *Our Solutions: GetWell Inpatient*. Get Well.

    https://www.getwellnetwork.com/getwell-inpatient/

Hibbard, J. H., & Greene, J. (2013). What the evidence shows about patient activation: Better

    health outcomes and care experiences; fewer data on costs. *Health Affairs*, *32*(2), 207–

    214. https://doi.org/10.1377/hlthaff.2012.1061

Ingadottir, B., Thylen, I., Ulin, K., & Jaarsma, T. (2020). Patients are expecting to learn more: A

    longitudinal study of patients with heart failure undergoing device implantation. *Journal*

    of Patient Education and Counseling, *103*, 1382–1389.

    https://doi.org/10.1016.j.pec.2020.02.023

Koh, H. K., Branch, C., Harris, L. M., & Parchman, M. L. (2013). A proposed 'health literate

    care model' would constitute a systems approach to improving patients' engagement in

    care. *Health Affairs*, *32*(2), 357–367. https://doi.org/10.1377/hlthaff.2012.1205

Langewitz, W., Ackermann, S., Heierle, A., Hertwig, R., Ghanim, L., & Bingisser, R. (2015).

    Improving patient recall of information: Harnessing the power of structure. *Journal of*

    Patient Education and Counseling, *98*, 716–721.

    https://doi.org/10.1016/j.pec.2015.02.003

Lau-Walker, M. (2014). Personalizing health promotion for more impact. *Nursing Times*, *110*,

    18–20. https://www.nursingtimes.net/clinical-archive/public-health-clinical-

    archive/personalising-health-promotion-for-more-impact-24-10-2014/

Lima de Melo Ghisi, G., Abdallah, F., Grace, S. L., Thomas, S., & Oh, P. (2014). A systemic

    review of patient education in cardiac patients: Do they increase knowledge and promote

    health behavior change? *Journal of Patient Education and Counseling*, *95*, 160–174.

    https://doi.org/10.1016/j.pec.2014.01.012

London, F. (2016). *No Time to Teach: The essence of patient and family education for health*

    care providers. Pritchett & Hull.

Luther, B., Wilson, R. D., Kranz, C., & Krahulec, M. (2019). Discharge processes: What

    evidence tells us is most effective. *Orthopaedic Nursing*, *38*(5), 328–332.

    https://doi.org/10.1097/NOR.0000000000000601

Magnani, J. W., Mujahid, M. S., Aronow, H. D., Cene, C. S., Dickson, V. V., Havranek, E.,

    Morgenstern, L. B., Paasche-Orlow, M. K., Pollack, A., & Willey, J. Z. (2018). Health

    literacy and cardiovascular disease: Fundamental relevance to primary and secondary

    prevention: A scientific statement from the American Heart Association. *Circulation*,

    138(2), e48–e74. https://doi.org/10.1161/CIR.0000000000000579

Masterson Creber, R., Patey, M., Lee, C. S., Kuan, A., Jurgens, C., & Riegel, B. (2016).

    Motivational interviewing to improve self-care for patients with chronic heart failure:

MITI-HF randomized controlled trial. *Patient Education and Counseling*, *99*, 256–264.

      https://doi.org/10.1016/j.pec.2015.08.031

Matsuoka, S., Tsuchihashi-Makaya, M., Kayane, T., Yamada, M., Wakabayashi, R., Kato, N. P.,

      & Yazawa, M. (2016). Health literacy is independently associated with self-care behavior

      in patients with heart failure. *Journal of Patient Education and Counseling*, *99*, 1026–

      1032. https://doi.org/10.1016/j.pec.2016.01.003

Mikhail, B. (1981). The health belief model: A review and critical evaluation of the model,

      research and practice. *Advances in Nursing Science*, 65–82.

      https://pdfs.journals.lww.com/advancesinnursingscience/1981/10000/The_health_belief_

      model__a_review_and_critical.7.pdf?token=method|ExpireAbsolute;source|Journals;ttl|1

      647752037738;payload|mY8D3u1TCCsNvP5E421JYK6N6XICDamxByyYpaNzk7FKjT

      aa1Yz22MivkHZqjGP4kdS2v0J76WGAnHACH69s21Csk0OpQi3YbjEMdSoz2UhVybF

      qQxA7lKwSUlA502zQZr96TQRwhVlocEp/sJ586aVbcBFlltKNKo+tbuMfL73hiPqJliud

      qs17cHeLcLbV/CqjlP3IO0jGHlHQtJWcICDdAyGJMnpi6RlbEJaRheGeh5z5uvqz3FLH

      gPKVXJzdW0j9OQ3VwQC4YJPRSln6bUjhjGBgcZfZXs8gZftbQpKPi0dQyPcatohSPI

      YxNojD;hash|uMQPX0KRHX2ocwPPCl4TyA==

Mohammadpour, A., Rahmati, N., Khosravan, S., Alami, A., & Akhond, M. (2015). The effect

      of a supportive educational intervention developed based on the Orem's self-care theory

      on the self-care ability of patients with myocardial infarction: A randomised controlled

      trial. *Journal of Clinical Nursing*, *24*, 1686–1692. https://doi.org/10.1111/jocn.12775

National Institute of Health. (2020). *Health Literacy*. NIH National Library of Medicine.

      Retrieved September 11, 2020, from https://nnlm.gov/initiatives/topics/health-literacy

Nutbeam, D. (2000). Health literacy as a public health goal: A challenge for contemporary health

    education and communication strategies into the 21st century. *Health Promotion*

    International, *15*, 259–267.

Okrainec, K., Lau, D., Abrams, H. B., Hahn-Goldberg, S., Brahmbhatt, R., Huynh, T., Lam, K.,

    & Bell, C. M. (2017). Impact of patient-centered discharge tools: A systematic review.

    Journal of Hospital Medicine, *12*(2), 110–117. https://doi.org/10.12788/jhm.2692

Pietrzykowski, L., Kasprzak, M., Michalski, P., Kosobucka, A., Tomas, Fabiszak, & Kubica, A.

    (2021). The influence of patient expectations on adherence to treatment regimen after

    myocardial infarction. *Patient Education and Counseling*.

    https://doi.org/10.1016/j.pec.2021.05.030

Press-Ganey. (2022). *Hospital Consumer Assessment of Healthcare Providers and Systems*

    (HCAHPS) (UK HealthCare).

Regalbuto, R., Maurer, M. S., Mendez, J., & Shaffer, J. A. (2014). Joint Commission

    requirements for discharge instructions in patients with heart failure: Is understanding

    important for preventing readmissions? *Journal of Cardiac Failure*, *20*(9), 641–649.

    https://doi.org/10.1016/j.cardfail.2014.06.358

Robert Wood Johnson Foundation. (2013). *Health policy brief: Patient engagement* (February

    14, 2013) [Policy Brief]. healthaffairs.org/healthpolicybriefs

Scheck McAlearney, A., Walker, D. M., Gaughan, A., Moffat-Bruce, S., & Heurta, T. R. (2020).

    Helping patients be better patients: A qualitative study of perceptions a bout inpatient

    portal use. *Telemedicine and e-Health*, *26*(9), 1184–1187.

    https://doi.org/10.1089/tmj.2019.0198

Siegrist, V., Langewitz, W., Mata, R., Maiori, D., Hertwig, R., & Bingisser, R. (2018). The influence of information structuring and health literacy on recall and satisfaction in a simulated discharge communication. *Journal of Patient Education and Counseling*, *101*, 2090–2096. https://doi.org/10.1016/j.pec.2018.08.008

Tah, Y. V., Sherrod, D. R., Onsomu, E. O., & Howard, D. C. (2019). Utilizing the IDEAL discharge process to prevent 30-day readmissions. *Nursing Management*, 28–32. nursingmanagement.com

Timmons, F., & Kaliszer, M. (2003). Information needs of myocardial infarction patients. *European Journal of Cardiovascular Nursing*, *2*, 57–65. elsevier.com/locate/ejcnurse

U.S. Department of Education. (2006). *The health literacy of America's adults: Results from the 2003 National Assessment of Adult Literacy* (NCES 2006-483) [Report]. https://nces.ed.gov/pubs2006/2006483.pdf

UK Healthcare. (2020). *About Us: Hospitals & Clinics*. https://ukhealthcare.uky.edu/hospitals-clinics

UK HealthCare. (2020a). *Patient and Family Education* (#A11-130) [Policy]. UK HealthCare. https://ukhealthcare.mc.uky.edu/policies/enterprise/_layouts/15/WopiFrame.aspx?source doc=/policies/enterprise/Enterprise/A11-130

UK HealthCare. (2020b). *We are made for times like these: 2020 Annual Report* [Annual Report]. https://ukhealthcare.uky.edu/sites/default/files/uk-healthcare-annual-report-2020.pdf

UK HealthCare. (2021). *Six years as Kentucky's #1 hospital*. ukhealthcare.uky.edu. https://ukhealthcare.uky.edu/kentuckys-no-1-hospital-2021

UK HealthCare. (2022). *Enterprise HCAHPS Quarters* [Tableau Data Table].

    https://tableau.mc.uky.edu/#/views/HCAHPS_Enterprise_Unit_validate/HCAHPSEnterpr

    iseQtrs?:iid=1

University of North Carolina at Chapel Hill. (2014). *Health Literacy Data Map* [Data Map].

    Communicate Health. http://healthliteracymap.unc.edu/#

Veronovici, N. R. (2014). Discharge education to promote self-management following

    cardiovascular surgery: An integrative review. *European Journal of Cardiovascular*

    Nursing, *13*(1), 22–31. https://doi.org/10.1177/1474515113504863

Weiss, M. E., Piacentine, L. B., Lokken, L., Ancona, J., Archer, J., Gresser, S., Baird Holmes, S.,

    Toman, S., Toy, A., & Vega-Stromberg, T. (2007). Perceived readiness for hospital

    discharge in adult medical-surgical patients. *Clinical Nurse Specialist*, *21*(1), 31–42.

Younas, A., & Quennell, S. (2019). Usefulness of nursing theory-guided practice: An integrative

    review. *Scandinavian Journal of Caring Sciences*, 540–555.

    https://doi.org/10.1111/scs.12670

Zhou, Y., Liao, J., Feng, F., Ji, M., Zhao, C., & Wang, X. (2018). Effects of a nurse-led phone

    follow-up education program based on the self-efficacy among patients with

    cardiovascular disease. *Journal of Cardiovascular Nursing*, *33*(1), E15–E23.

    https://doi.org/10.1097/JCN.0000000000000414

Table 1

HCAHPS care transitions scores on 4 cardiovascular units

Care Transitions Statements	Unit 1 (n=187)	Unit 2 (n=132)	Unit 3 (n=328)	Unit 4 (n=79)
"Good understanding of managing health"	61.2%	62.8%	65.5%	62.7%
"Understood purpose of taking meds"	66.4%	67.3%	68.2%	68.5%

Note. Threshold value = 73.00%; values averaged from HCAHPS scores FY 2021 Q2 through FY 2022 Q2.

Table 2

Demographic characteristics of sample

	Group 1 (n=40) mean (SD), n (%) or median (IQR)	Group 2 (n=25) mean (SD), n (%) or median (IQR)
Age (years)	60.0 (9.9)	57.4 (13.2)
Gender		
Male	27 (67.5%)	18 (72.0%)
Female	13 (32.5%)	7 (28.0%)
Race / Ethnicity		
White	36 (90.0%)	22 (88.0%)
Black	3 (7.5%)	3 (12.0%)
Unreported	1 (2.5%)	-
Length of Stay (days)	7.0 (3.5 – 9.0)	7.5 (60. – 17.75)
Patient Education Assessment		
Present in EMR (N=49)	29 (72%)	20 (80%)
Day Completed		
Day of Admission	9 (31.0%)	5 (25%)
+1	4 (13.8%)	7 (35%)
+2	2 (6.9%)	1 (5%)
+3	4 (13.8%)	1 (5%)
+4	4 (13.8%)	1 (5%)
+5	3 (10.3%)	3 (15%)
+6	-	2 (10%)
+7	1 (3.4%)	-
+10	1 (3.4%)	-
+13	1 (3.4%)	-
Learning Style Preference*		
Listening	29 (72.5%)	18 (72.0%)
Reading	6 (15.0%)	9 (36.0%)
Demonstration	9 (22.5%)	9 (36.0%)
Video/Picture	1 (2.5%)	2 (8.0%)
Cardiac Diagnosis		
Arrhythmia	3 (7.5%)	2 (8.0%)
Coronary Artery Disease	19 (47.5%)	9 (36.0%)
Heart Failure	9 (22.5%)	2 (8.0%)
Myocardial Infarction	7 (17.5%)	5 (20.0%)
Structural Heart Disease	2 (5.0%)	7 (28.0%
Unit Assignment		
6 North	6 (15.0%)	5 (20.0%)
6 West	6 (15.0%)	2 (8.0%)
8-100 Universal	24 (40.0%)	9 (36.0%)
8-200 ICU	4 (10.0%)	9 (36.0%)

* Select all that apply

Table 3

Two sample t-test: Patient utilization of GWN pre- and post-intervention.

Variable Patient Group (N=)	Mean percent (SD)	p-value (significant < 0.05)
Videos Started		
G1 (N=3)	45.5 (50.6)	0.87
G2 (N=25)	50.3 (49.2)	
New Video – Immediate Prompt		
Response = view now		
G1 (N=20)	5.0 (22.4)	0.62
G2 (N=24)	8.5 (23.1)	
Response = remind me later		
G1 (N=20)	2.5 (11.2)	0.20
G2 (N=24)	9.0 (21.2)	
New Video – Daily Prompt		
Response = view now		
G1 (N=31)	1.6 (5.0)	0.47
G2 (N=23)	3.0 (8.5)	
Response = remind me later		
G1 (N=31)	33.2 (34.7)	0.83
G2 (N=23)	31.1 (33.9)	
New Medication – Immediate Prompt		
Response = view now		
G1 (N=35)	3.7 (7.7)	0.26
G2 (N=22)	8.0 (16.5)	
Response = remind me later		
G1 (N=35)	17.8 (23.4)	0.29
G2 (N=22)	11.3 (17.0)	
New Medication - Daily Prompt		
Response = view now		
G1 (N=40)	10.6 (23.3)	0.58
G2 (N=24)	13.7 (16.3)	
Response = remind me later		
G1 (N=40)	28.4 (25.9)	0.41
G2 (N=24)	23.2 (21.0)	
Medications Reviewed Electively		
G1 (N=40)	6.3 (18.6)	0.054
G2 (N=25)	21.0 (34.0)	

Figure 1

Difficulty of consumer health tasks by health literacy level

Health Literacy Scale	Score	Skill Level
Proficient 310-500	382	Calculate share of health insurance costs for a year, using a table that shows how the employee's monthly cost varies depending on income and family size
	366	Find the information required to define a medical term by searching through a complex document
	325	Evaluate information to determine which legal document is applicable to a specific health care situation
Intermediate 226-309	290	Determine a healthy weight range for a person of a specified height, based on a graph that relates height and weight to body mass index (BMI)
	266	Find the age range during which children should receive a particular vaccine, using a chart that shows all the childhood vaccines and the ages children should receive them
	253	Determine what time a persona can take a prescription medication, based n information on the prescription drug label that relates the timing of medication to eating
	228	Identify three substances that may interact with an over-the-counter drug to cause a side effect, using information on the over-the-counter drug label
Basic 185-225	202	Give two reasons a person with no symptoms of a specific disease should be tested for the disease, based on information in a clearly written pamphlet
	201	Explain why it is difficult for people to know if they have a specific chronic medical condition, based on information in a one-page article about the medical condition
Below Basic 0-184	169	Identify how often a person should have a specified medical test, based on information in a clearly written pamphlet
	145	Identify what it is permissible to drink before a medical test, based on a set of short instructions
	101	Circle the date of a medical appointment on a hospital appointment slip

Note. The position of a question on the scale represents the average scale score attained by adults who had a 67% probability of successfully answering the question. Only selected questions presented. (U.S. Department of Education [USDE], 2006).

Figure 2

UKHC GWN home screen
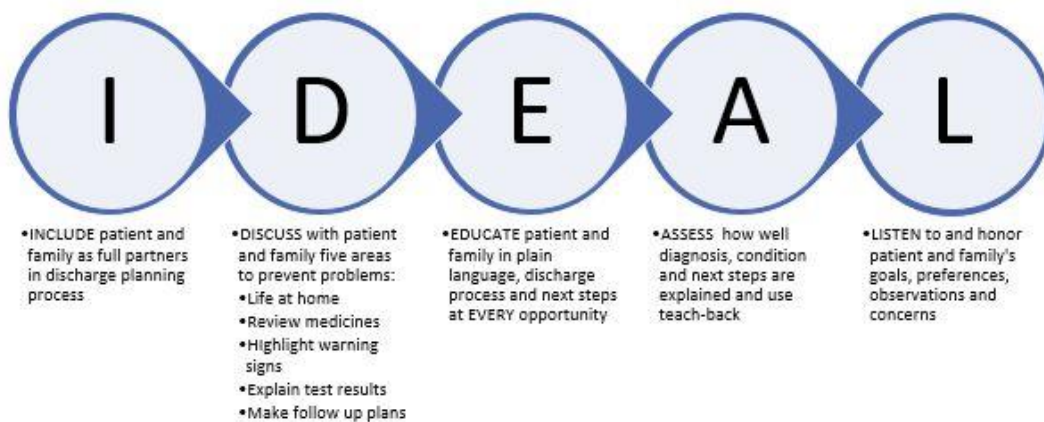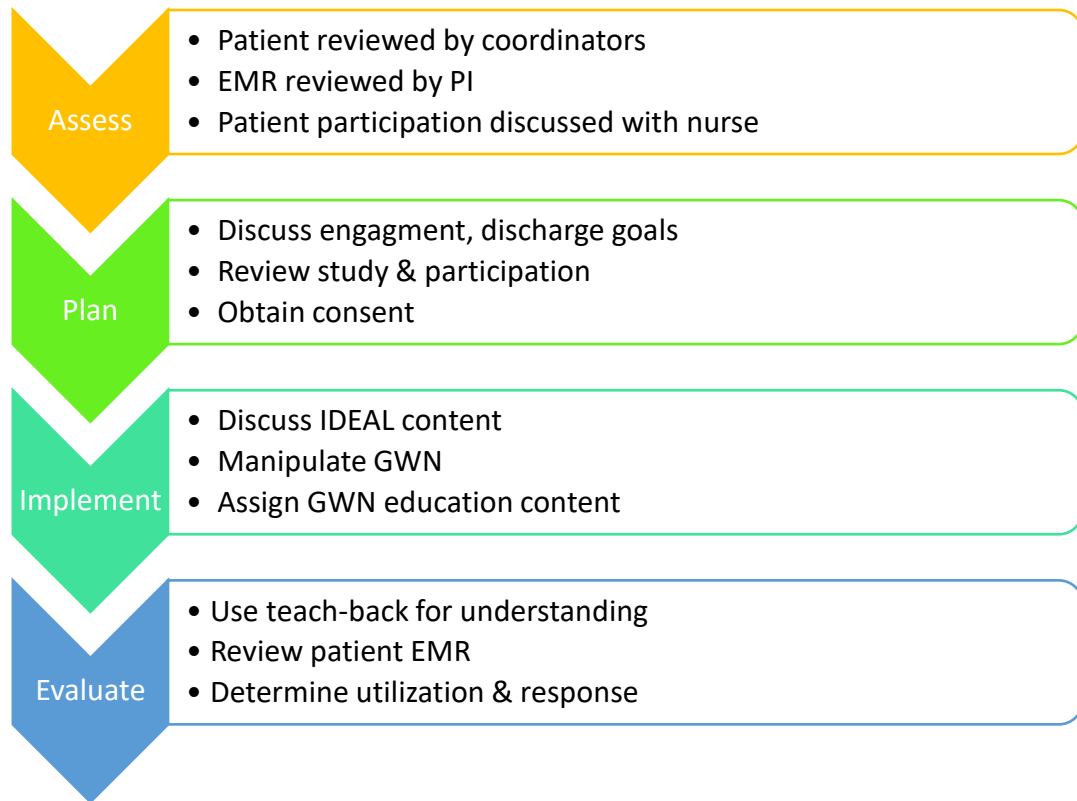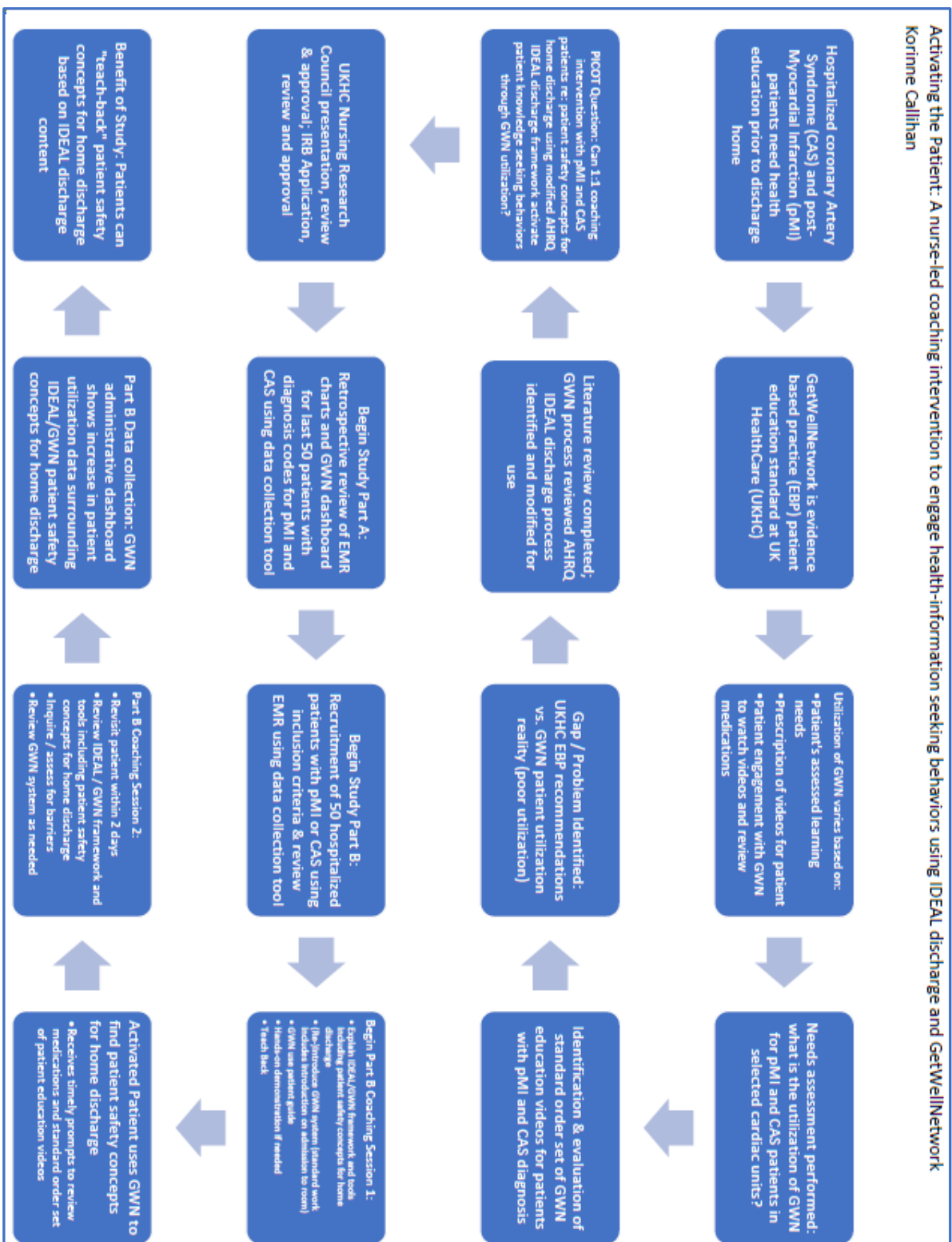

Figure 3

The IDEAL discharge process (AHRQ, 2011)

Figure 4

Activating the patient: Project process map

Appendix A:
Activating the Patient Project Flowchart

Activating the Patient: A nurse-led coaching intervention to engage health-information seeking behaviors using IDEAL discharge and GetWellNetwork

Korinne Callihan

- Hospitalized coronary Artery Syndrome (CAS) and post-Myocardial Infarction (pMI) patients need health education prior to discharge home

- GetWellNetwork is evidence based practice (EBP) patient education standard at UK HealthCare (UKHC)

- Utilization of GWN varies based on:
  - Patient's assessed learning needs
  - Prescription of videos for patient
  - Patient engagement with GWN to watch videos and review medications

- Needs assessment performed: what is the utilization of GWN for pMI and CAS patients in selected cardiac units?

- Identification & evaluation of standard order set of GWN education videos for patients with pMI and CAS diagnosis

- Begin Part B Coaching Session 1:
  - Explain IDEAL/GWN framework and tools including patient safety concepts for home discharge
  - (Re-)Introduce GWN system (standard work includes Introduction on admission to room)
  - GWN use patient guide
  - Hands-on demonstration if needed
  - Teach Back

- Gap / Problem Identified: UKHC EBP recommendations vs. GWN patient utilization reality (poor utilization)

- Literature review completed; GWN process reviewed AHRQ IDEAL discharge process identified and modified for use

- PICOT Question: Can 1:1 coaching intervention with pMI and CAS patients re: patient safety concepts for home discharge using modified AHRQ IDEAL discharge framework activate patient knowledge seeking behaviors through GWN utilization?

- UKHC Nursing Research Council presentation, review & approval; IRB Application, review and approval

- Begin Study Part A: Retrospective review of EMR charts and GWN dashboard for last 50 patients with diagnosis codes for pMI and CAS using data collection tool

- Begin Study Part B: Recruitment of 50 hospitalized patients with pMI or CAS using inclusion criteria & review EMR using data collection tool

- Part B Coaching Session 2:
  - Revisit patient within 2 days
  - Review IDEAL / GWN framework and tools including patient safety concepts for home discharge
  - Inquire / assess for barriers
  - Review GWN system as needed

- Activated Patient uses GWN to find patient safety concepts for home discharge
  - Receives timely prompts to review medications and standard order set of patient education videos

- Benefit of Study: Patients can "teach-back" patient safety concepts for home discharge based on IDEAL discharge content

- Part B Data collection: GWN administrative dashboard shows increase in patient utilization data surrounding IDEAL/GWN patient safety concepts for home discharge

❑ I know the name of the problem that brought me into the hospital and what it means.

❑ I know what problems to look for and who to call if I have problems at home.

❑ I feel confident that I or someone close to me can take care of me at home and knows the next steps in my care.

❑ I know what my medicines are and how to take them.

❑ I know my follow up appointment is an important part of my continued care.

❑ I know when my follow up appointments are and how to get there.

❑ My doctors or nurses answered all of my questions.

Tips for Going Home

Your nurses, doctors and other staff who make up your medical team have selected videos for you to watch through the GetWellNetwork to help you get ready to go home.

- Write down in your booklet what you learn in the GetWellNetwork videos, and what your doctors and nurses say. Write down ideas from the videos about what your condition is, how it will impact your day-to-day life, what needs to be done and who can help.

- Re-watch the videos and instructions about your medicines as many times as you would like to better understand what you need to do to take good care of yourself. If you need more help, ask your doctor or nurse questions until you understand and get the answers you need.

- You may have other questions or concerns that are not included in this checklist. Please ask us your questions. Make sure you have your answers before you leave.

University of Kentucky
College of Nursing

AHRQ
Agency for Healthcare Research and Quality
Advancing Excellence in Health Care • www.ahrq.gov

Be Prepared to Go Home the IDEAL Way

Before you leave the hospital, we want to make sure you feel ready to be at home. At UK HealthCare, you can use an in-room patient education system called GetWellNetwork (GWN) to find and review information that will help you take care of yourself at home.

This page has a checklist to use as reminders of important information to learn in GWN and to discuss with your doctor or nurse.

Use the checklist to see what information you still need as you prepare to go home. If you cannot check a box, you may re-watch videos in the GetWellNetwork system as many times as you'd like.

Your doctors and nurses will make sure to answer your questions and address your concerns. We want you to have all the information you need.

Guide to Patient and Family Engagement

Welcome to getwell:)network

UK HealthCare

Learn about your health. Communicate with hospital staff. Surf the Web. Play games. Watch your favorite TV shows and movies.

Let's Get Started

1 Make sure the TV is on

2 Press the MENU button and the on screen controls will appear

3 Use the arrow keys to navigate GetWellNetwork, press SELECT to make your choice

4 Select the "home" icon from the on screen controls
From this view, you can:
- Learn about your health, medications, and hospital stay
- Discover available services like Child Life and Pastoral Care
- Leave feedback about your care
- Watch movies, play games, or surf the Internet

Messages from your Caregivers

From time to time during your stay, you may see important messages appear on your TV. These messages come in different shapes and sizes and are specifically for you. Stay involved in your care by interacting with these messages, and please let the staff know if you have any questions.

What You Need to Use the GetWellNetwork® System

Your room should be equipped with a GetWellNetwork remote and keyboard. Use these devices for navigating the system and typing. If you don't have a GetWellNetwork remote or keyboard just ask your nurse for one. Your remote or keyboard may not look exactly like the ones pictured below, but will act very similar — if you have questions please ask your nurse.

Keyboard
Use these shortcut buttons for quick access to commonly used features such as TV, Internet, or Movies.

Touchpad Mouse
Use the touchpad to move the mouse around the screen. Use the left button as the primary click and the right button as the secondary click.

GetWellNetwork Home Screen
Use the GetWellNetwork button to quickly access your system home page.

Remote

Menu Button
At any time, press the MENU button and the on screen controls will appear. Use these controls to navigate the system, increase font size, and other helpful actions.

Arrow and Select Button
Use the arrow keys to navigate GetWellNetwork and press SELECT to make your choice.

Shortcut Buttons
Look for shortcut buttons to features such as TV, Internet, and Movies.

Helpful On Screen Control Tips

Press the MENU button to access on screen controls such as:
- Increasing or decreasing volume
- Controlling font size
- Enabling Closed Captioning
- Accessing movie controls like pause, fast forward, and rewind

Have questions? Need help? Call our 24-hour help desk 1.888.496.3375.

This resource was adapted for this study by Korinne Callihan from the IDEAL discharge framework developed by the AHRQ and the "Getting Ready to Go Home" Checklist from UK HealthCare. The AHRQ IDEAL discharge materials can be found in their original format at www.ahrq.gov/patient-safety/patients-families/engagingfamilies/strategy4.